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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/847,909	05/02/2001	Marten S. Callicott	GT-4684 (GC-EU-CIP-DIV)	9015
40629	7590	06/17/2004	EXAMINER	
OMNOVA SOLUTIONS, INC. 175 GHENT ROAD FAIRLAWN, OH 44333-3300			FLETCHER III, WILLIAM P	
			ART UNIT	PAPER NUMBER
			1762	

DATE MAILED: 06/17/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 09/847,909	Applicant(s) CALLICOTT ET AL.	
	Examiner William P. Fletcher III	Art Unit 1762	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 25 May 2004.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 44-60 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 44-60 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input checked="" type="checkbox"/> Other: <u>chemical dictionary definition</u> . |

DETAILED ACTION

Response to Amendment

1. The examiner acknowledges and appreciates applicant's compliant and responsive amendment, filed 3/25/2004. This amendment cancelled claims 1-43 and added new claims 44-60. Claims 44-60 are now pending.

Response to Arguments

2. The examiner fully considered applicant's arguments filed with the amendment of 3/25/2004. These arguments, in view of applicant's amendment, are persuasive. Accordingly, the examiner withdraws all objections and rejections set-forth in the Office action mailed 4/2/2003.

Specifically, Hargis (US 5,674,951 A) teaches *amine* cross-linking agents, rather than the recited *amino resin*. The examiner understands an amino resin (aminoplast resin) to be "a class of thermosetting resins made by the reaction of an amine with an aldehyde. The only such aldehyde in commercial use is formaldehyde, and the most important amines are urea and melamine."¹ Consequently, this reference no longer reads on the claims as-amended. Since the examiner based all of the rejections in the Office action mailed 4/2/2003 on this reference, these rejections are withdrawn.

Claim Rejections - 35 USC § 112

3. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

¹ *Hawley's Condensed Chemical Dictionary, 12th Edition*, © 1993 by Van Nostrand Reinhold, page 60, attached.

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4. **Claims 44-60 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement.** The claim(s) contain(s) subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

Claim 44 recites "...a polymer comprising at least one carboxyl end group...". The originally-filed disclosure lacks support for this limitation. Pages 2 and 5 of the specification clearly recite that this fluoroalkoxyalkyl (FOX)-containing polymer is hydroxyl-terminated, but nowhere discloses a carboxyl-terminated polymer.

The examiner acknowledges that, based on the disclosure as a whole, the reaction product of the pre-formed polyester and the hydroxyl-terminated, FOX-containing polymer may be carboxyl-terminated. If this is the case, and this is indeed what applicant intends to recite in claim 44, the originally-filed disclosure does not support further reaction of such a polymer with a pre-formed polyester or a blend comprising at least one dicarboxylic acid and at least one polyol.

Further, claim 44 recites "...at least one ether repeat unit comprising one pendant fluoroalkoxyalkyl group...". The originally-filed disclosure lacks support for this limitation. Page 2 of the specification provides the broadest description of this component of applicant's invention: "...a hydroxyl terminated polymer having repeat units from an oxetane monomer having pendant fluorinated groups thereon...". This disclosure is narrower than applicant's claimed limitation because the ether repeat unit comes from an oxetane monomer, whereas the ether repeat unit of claim 44 may come from any source whatsoever. In other words, with

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respect to the FOX moiety, the originally-filed disclosure fully supports claim 48, but not claim 44.

Allowable Subject Matter

5. The examiner rejected all of the pending claims under 35 U.S.C. § 112, 1st Paragraph above. The examiner has not applied any art against these claims because the prior art neither teaches nor suggests a polymer comprising at least one carboxyl group, as recited by claim 44.

Conclusion

1. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to William P. Fletcher III whose telephone number is (571) 272-1419. The examiner can normally be reached on Monday through Friday, 9 AM to 5 PM.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Shrive P. Beck can be reached on (571) 272-1415. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

WPF 6/6/2004

William P. Fletcher III

Examiner

Art Unit 1762



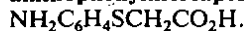
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09/547, 909

1-amino-2-phenylethane. See 2-phenylethylamine.

o-aminophenylglyoxalic lactim. See isatin.

p-aminophenylmercaptoacetic acid.



Properties: Mp 186–187°C, insoluble in water, alcohol, benzene, chloroform; soluble in aqueous acid or alkali solutions.

Use: Synthetic intermediate for dyes and pharmaceuticals.

2-(p-aminophenyl)-6-methylbenzothiazole.

See dehydrothio-p-toluidine.

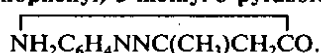
m-aminophenyl methyl carbinol.



Properties: Solid, d 1.12, bp 217.3°C (100 min), mp 66.4°C, soluble in water, flash p 315°F (157°C). Combustible.

Use: Carrier for dyeing synthetic fibers; intermediate for perfume, chemicals, and pharmaceuticals.

1-(m-aminophenyl)-3-methyl-5-pyrazolone.



Properties: Light tan paste containing approximately 45% solids.

Use: Intermediate.

α -amino- β -phenylpropionic acid. See phenylalanine.

aminopherase. See transaminase.

aminophylline. (3,7-dihydro-1,3-dimethyl-1H-purine-2,6-dione compounded with 1,2-ethanediamine (2:1)). $\text{C}_{16}\text{H}_{24}\text{N}_{10}\text{O}_4$.

Properties: White or slightly yellowish granular powder, slight ammonia odor, bitter taste. Mw 420.44.

Derivation: Prepared from theophylline and aqueous ethylenediamine.

Hazard: Cardiovascular and respiratory collapse. Use: Small animal muscle relaxant for heaves in horses, and diuretic in dogs with congestive heart failure.

aminopicoline. See aminomethylpyridine.

aminoplast resin. (amino resin). A class of thermosetting resins made by the reaction of an amine with an aldehyde. The only such aldehyde in commercial use is formaldehyde, and the most important amines are urea and melamine. Use: Molding, adhesives, laminating, textile finishes, permanent-press fabrics, wash-and-wear apparel fabrics, protective coatings, paper manufacture, leather treatment, binders for fabrics,

foundry sands, graphite resistors, plaster-of-paris fortification, foam structures, and ion-exchange resins.

See dimethylol urea, methylol urea, melamine resin, urea-formaldehyde resin.

2-aminopropane. See isopropylamine.

2-aminopropanoic acid. See alanine.

3-aminopropanoic acid. See β -alanine.

1-amino-2-propanol. See isopropanolamine.

2-amino-1-propanol. (2-aminopropyl alcohol; β -propanolamine). $\text{CH}_3\text{CH}(\text{NH}_2)\text{CH}_2\text{OH}$.

Properties: Colorless to pale yellow liquid. Both *l* and *dl* forms are available. *dl*-form: fish odor, bp 173–176°C, freely soluble in water, alcohol, ether. *l*-form: refr index 1.4480–1.4495 (26°C), distillation range approximately 114°C at 100 mm Hg. Combustible.

Use: Organic synthesis and chemical intermediate.

3-amino-1-propanol. (propanolamine).



Properties: Colorless liquid, mp 12.4°C, bp 184–186°C (168°C), flash p 175°F (79.4°C), d 0.9786 (30°C). Miscible with alcohol, water, acetone, and chloroform. Combustible.

Grade: 99% pure.

Hazard: Irritant to tissue.

Use: Organic intermediate.

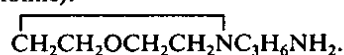
3-aminopropionitrile. $\text{H}_2\text{NCH}_2\text{CH}_2\text{CN}$.

Properties: Colorless liquid, bp 185°C, refr index 1.44. May polymerize if stored in presence of air. Derivation: Reaction of acrylonitrile with ammonia.

Use: Production of β -alanine and pantothenic acid.

2-aminopropyl alcohol. See 2-amino-1-propanol.

N-aminopropylmorpholine. (4-(3-aminopropyl)morpholine).

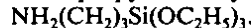


Properties: Colorless liquid, d 0.9872 (20/20°C), bp 224.5°C, flash p 220°F (104.4°C) (OC), fp –15°C, soluble in water and alcohol. Combustible.

Hazard: Strongly irritant to tissue.

Use: Fiber synthesis; chemical intermediate.

γ -aminopropyltriethoxysilane.



Properties: Liquid, bp 217°C, d 0.94 (25°C).

Use: Sizing of glass fibers for making laminates.

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09/847,909

Hawley's
Condensed Chemical
Dictionary

TWELFTH EDITION

Revised by
Richard J. Lewis, Sr.

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